*Health Mobilization Series* | I-2

# THE ROLE OF THE
# Dentist
# in National Disaster



U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
Public Health Service

*Health Mobilization Series* I–2

# THE ROLE OF THE Dentist in National Disaster

Prepared by a study committee
appointed by the
Council on Federal Dental Services
of the American Dental Association,
in cooperation with
the Division of Health Mobilization

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
Public Health Service
Division of Health Mobilization
Reprinted January 1965

Public Health Service Publication 1071-I-2

# CONTENTS

# INTRODUCTION

The American Dental Association, at the invitation of the Division of Health Mobilization of the U.S. Public Health Service, agreed to participate jointly in the sponsorship of a study committee to examine the role of the dentist in a post-nuclear disaster period. The study project, by agreement, was provided staff support by the Division of Health Mobilization with funding managed under a contract between the Division and the Office of Civil Defense. This document is the committee's report.

The committee believes that the report will be more readily understood if certain background information is first presented. Accordingly, there follows a list of the committee members and the committee staff, and a statement of the current policies of the American Dental Association with respect to civil defense and disaster preparedness.

## A. Committee and Staff Personnel

Chairman: Dr. George P. Hoffmann, Greenville, South Carolina; Chairman, Council on Federal Dental Services, American Dental Association.

Dr. John R. Abel, Beverly Hills, California; Past President, American Dental Association.

Dr. Allen R. Cutler, Boise, Idaho; Executive Secretary, Idaho State Dental Association.

Dr. Fred A. Henny, Detroit, Michigan; Editor, *Journal of Oral Surgery, Anesthesia and Hospital Dental Service;* Chief of Dental Service, Henry Ford Hospital.

Dr. I. Lawrence Kerr, Endicott, New York; Chairman, Civil Defense Committee, Dental Society of the State of New York; Past President, American Dental Society of Anesthesiology.

Dr. David W. Matteson, Oklahoma City, Oklahoma; Member, Health Resources Advisory Committee, Office of Emergency Planning; Past Chairman, Council on Federal Dental Services, American Dental Association.

Dr. Charles A. McCallum, Jr., Birmingham, Alabama; Dean, School of Dentistry, University of Alabama.

Captain Victor J. Niiranen, DC, USN, Washington, D.C.; Staff Dental Officer, Headquarters, U.S. Marine Corps.

Miss Margaret E. Swanson, Chicago, Illinois; Executive Secretary, American Dental Hygienists' Association.



758-745 O - 65 - 2

Dr. David M. Witter, Portland, Oregon; Dental Director, Oregon State Department of Health.

**Staff**

Dr. William B. Bock, Division of Dental Public Health and Resources, USPHS; Dr. Ernest C. Leatherwood, Jr., Office of the Surgeon General, USPHS: Mr. Herbert C. Lassiter, Secretary, Council on Federal Dental Services, American Dental Association.

## B. Current Policies of the American Dental Association

The following *Statement on Disaster Medical Care Responsibilities* was adopted by the House of Delegates of the American Dental Association in 1960:

> The American Dental Association recognizes that a mass attack on the United States would result in a severe disparity between the number of casualties among the surviving population and the number of physicians available to treat them. It is further recognized that, in order that physicians' skills may be conserved under disaster conditions, members of other health disciplines, including dentistry, must acquire proficiency in the performance of emergency medical functions. To this end, the following principles are approved:
>
> (1) Every dentist is responsible for taking an active part in civil and defense mobilization planning and training in his community.
>
> (2) Dentists should train to develop the ability to perform such disaster medical services as will enable them to assist the medical profession in preserving the life of and restoring the health of the injured population.
>
> (3) Additional functions in the emergency performance of which dentists must become proficient shall include those listed in the *Report on National Emergency Medical Care.*
>
> (4) Constituent and component dental societies have an obligation to develop, either independently or in cooperation with State and local medical and hospital associations, such programs as will enable their members to acquire the necessary proficiency in emergency medical care principles and technics.

Three other resolutions dealing with disaster preparedness were also adopted by the House of Delegates of the Association in 1960, all at the recommendation of the Council on Federal Dental Services. Those resolutions, which are still in effect are as follows:

(1) *Resolved,* that the provisions of the Model State Civil Defense Act dealing with immunity from civil actions for damages and exemption from prosecution under State medical practice acts for authorized civil defense workers be endorsed, and be it further

*Resolved,* that each constituent society be urged to seek, either independently or in cooperation with other health organizations, the enactment of State legislation which will afford such immunity and exemption to its members and to other groups which have a recognized responsibility to participate in the management and treatment of casualties in emergency conditions.

(2) *Resolved,* that the appropriate agencies of the Association be authorized to support before Congress those portions of the annual budget appropriation requests of the Office of Civil and Defense Mobilization which pertain to the program of the Division of Health Mobilization of the U.S. Public Health Service.

(3) *Resolved,* that the Family Shelter Program promulgated by the Federal Government be endorsed, and be it further

*Resolved,* that every member of the Association be urged to contribute to the security of the nation by taking such measures as reasonably will insure the ability of himself and his family to survive a nuclear attack.

# OBJECTIVES AND APPROACH

The broad objectives which the study committee were directed to pursue according to the official contract were as follows:

(1) Expanded functions of dentists.

(2) Additional functions for dentists.

(3) Additional functions common to dentists, veterinarians, and pharmacists.

(4) Recommendations for the utilization of ancillary personnel, e.g. dental assistants, etc.

(5) Relationship to the medical profession's overall emergency medical care program.

(6) Recommendations for accomplishing preparedness in these expanded roles.

(7) Identification of current professional training capabilities and functions for each discipline within the health and medical service field.

The committee held its first meeting at the Central Office of the American Dental Association, in Chicago, on December 10–11, 1963. After being briefed by personnel of the Division of Health Mobilization and the Office of Civil Defense, the committee divided into subcommittees, with each subcommittee to apply itself to a full exploration of the first three objectives. The subcommittee reports were distributed among the full committee on the second day of the meeting and were submitted to dissection and analysis. The final preliminary report, which represented a synthesis of the subcommittee reports, was submitted at a meeting held in Washington, D.C., at Division headquarters, on January 31, 1964. Representatives of the dental study committee, the veterinary medical and pharmaceutical professions committees were also present. At this meeting, a critique was held on the preliminary reports submitted by the dental, pharmaceutical and veterinary

medical professions and suggestions were advanced for the management of the remaining objectives and for the design of the final report. The recommendations made at this meeting were communicated to the dental study committee at its second meeting, which was held in Washington, D.C., at the Department of Health, Education, and Welfare headquarters, on March 19–20, 1964. This report represents the final conclusions and recommendations developed by the committee at that meeting.

# SUMMARY AND CONCLUSIONS

The dentist has three basic areas of responsibility in which he can serve most effectively in the postdisaster period and in which his capability to provide maximum service to the surviving population can be expanded without resort to extradisciplinary training. These areas of responsibility can be broadly labeled as civic or community, administrative, and professional.

In meeting these responsibilities, the dentist will be called upon to exercise leadership with respect to community, family and individual-oriented disaster preparedness programs. He also will be required to fulfill roles in shelter and hospital programs that are consistent with his familiarity with total patient care principles and public health practices. He will be expected to apply his knowledge of professional technics and procedures to the care of the sick and injured of the surviving population. The basic character of the education, training and experience of the dentist identifies him as a most valuable resource of professional health manpower. The dental profession contains within itself the training potential to develop the latent capacity of its members to fulfill these three areas of responsibility.

Extra-disciplinary capability can also be attained through the institution of effective training programs under the combined aegis of the medical and dental professions. The auxiliaries to the dental profession also can be a more useful resource for disaster care through cooperative effort, training and leadership. Since the total complex of planning for a national nuclear disaster is fundamentally and properly a responsibility of government, it follows that the motivational guidance and the assurance of continuity of activity within a functional organization must also come from government. The dental profession is ready to assist in the development and implementation of effective programs that will assure a healthy and productive population. Effective leadership for national defense must come from the agencies capable of sustaining the effort, otherwise well-intentioned efforts will fail to assure attainment of the objective.

# PROFESSIONAL PROFILE

A profession exists for the purpose of serving the community. Dentistry, as a health profession, is concerned primarily with preserving the oral health of the community. In the United States, the dental profession includes approximately 109,000 dentists most of whom have been licensed by at least one State. Dentists, in order to acquire licensure have received extensive training involving a minimum of two years of college and four years of professional schooling. It is worthy of note that the greater percentage of students entering dental school today have obtained a baccalaureate degree or its equivalent. In preparing for the study of dentistry, the student is exposed to the biological sciences and receives a broad education in the behavioral and social sciences. In dental school, the student then receives a firm foundation in the biological sciences, including training in depth in anatomy, physiology, microbiology, biochemistry, pharmacology, and pathology. The last two years in dental school give the dental student the depth of clinical training which is essential to the practice of dentistry. This exposure includes training in the diagnosis, treatment and prevention of diseases of the oral cavity. In the past, considerable emphasis was placed on the technical aspects of dentistry, but, while these techniques are still demanded of the student, it is significant that the dental curriculum today displays an increasing awareness of the integral relation between oral health and total health.

Today, with increasing emphasis on research and basic scientific knowledge, it has become customary for the dental graduate to continue his training in order to preserve and advance his professional capabilities. Specialization in certain phases of dental practice requires education and experience beyond the basic doctoral degrees. Many dentists have undertaken this education through postdoctoral internships and residencies leading to specialty qualification.

The active dental profession includes 92,500 men in clinical practice, of whom 87,000 are in private practice. Among this number, about 5,700 are engaged in one of the eight recognized areas of specialty practice. Approximately 1,500 dentists are oral surgeons. Their advanced training and experience render them particularly valuable as instructors in surgical techniques, anesthesiology, and hospital procedures. Many other dentists are trained in, and practice, oral surgery and anesthesiology but have elected not to limit their practices. These men, too, constitute an important training resource. Of equal importance to the disaster preparedness training effort is the number of dentists already trained in the principles of public

health and the thousands who have received casualty care training while serving with the armed forces.

The dentist's academic experience and his vocation of providing a health service to the public leads him to the acquisition of skills that relate primarily to patient care. Secondarily, however, these skills relate to the management of personnel, the management of a business enterprise and active participation within organizations that deal with overall community problems. Through this combination of practically acquired skills, the dentist is capable of contributing administrative and organizational experience to the community health program.

As noted, the greater percentage of dentists is engaged in the general practice of dentistry. In the past, the man engaged in solo practice provided his services exclusively in his own office. Today, however, there is increased participation by the dentist in the community hospital and similar institutions. As a result the dentist's abilities are being extended into environments where they contribute more directly to the total health care of the patient. This broadening of the environment of dental practice is being reflected in the educational experience of the undergraduate student through increased orientation to institutional care, hospital protocol, care of the chronically ill patient, the mentally retarded patient, and other categories of patients requiring the team approach to health services. The increased clinical practice of dentistry in the hospital environment necessarily produces a high degree of interprofessional contact and coordination among members of the several professional health disciplines. As such, it provides the dentist with an awareness and understanding of hospital procedures and administration and gives to him the capacity to function as an effective element of the total patient care organization.

Auxiliary personnel normally associated with the practice of dentistry are the dental hygienist, the dental assistant, and the dental laboratory technician. Most dental hygienists are trained in the biological sciences to perform, under professional supervision, the intraoral procedures authorized by State dental hygiene licensure. There are approximately 8,500 hygienists working in dental offices. Dental assistants number approximately 80,000. They do not have as extensive formal training as do dental hygienists and they are not permitted to work in the oral cavity. The dental laboratory technician is an artisan who works under the specific direction, or in accordance with the written instructions, of the dentist in the fabrication of dental prosthetic appliances. Approximately 3,300 dental laboratory technicians work for dentists in laboratories situated in the dentists' offices. It is estimated that an additional 25,000 are employed by commercial dental laboratories. Each of these auxiliaries would be capable of providing some degree of assistance to the management of the community health problem associated with a nuclear disaster. It is apparent, however, that their present skill levels are disparate and that their capacities for absorbing additional training are quite distinct.

# ROLE OF THE DENTIST IN DISASTER PREPAREDNESS

The dentist has three basic areas of responsibility in which he can serve most effectively in the postdisaster period and in which his competence can be expanded without resort to extradisciplinary training. These areas of responsibility can be broadly labeled as civic or community, administrative, and professional.

## A. Civic or Community Responsibility

Civic or community responsibility should be recognized and assumed by each dentist through the exercise of his natural leadership. This can best be accomplished by taking an active role in encouraging, developing and instructing in Medical Self-Help, advanced first aid and other community and family-oriented disaster training and shelter program activities. To do this, the dentist should acquire sufficient background and experience to permit him to fulfill his role effectively. In some instances, this will require the dentist first to assume the role of the student before he can assume the role of the leader. In all of these activities, the dentist should project the positive attitude that, with effective preparation, the Nation will survive and recover from an enemy attack, whatever its severity.

## B. Administrative Responsibility

Administrative responsibility can be exercised beneficially by the dentist in the two environments that are expected to characterize the postdisaster period: the community shelter and the hospital. Familiarization with basic hospital administrative procedures should be sought by all dentists not previously trained or prepared in this field. This knowledge would permit the dentist to assume an important role in providing administrative continuity in Packaged Disaster Hospitals * and maintaining it in established hospitals. Shelter management, *per se*, could be accomplished, in most instances, by laymen. Overall management of the health problems of shelter inhabitants, however, can best be accomplished by health personnel. Dentists can contribute significantly to this effort of health administration by acquiring the skills necessary to direct the institution and maintenance of

*Formerly called "Civil Defense Emergency Hospitals".

systems related to sanitation, water potability protection and conservation, radioactive contamination, vector and rodent control and the combating of depressive psychological reactions to the shelter environment. Although some dentists may not be presently equipped to assume these administrative responsibilities, training is available in these areas within the dental profession. Such training should be sought.

## C. Professional Responsibility

Professional responsibility, as used here, relates to the many activities involved in patient management that are common to both medicine and dentistry. A large number of dentists, due to the restricted nature of their practices, presently lack the ability to perform many of the procedures that would be required in a mass medical emergency. These dentists should undertake to establish, or re-establish, the capabilities to perform in the following fundamental areas of dental practice including:

1. diagnosis, including the knowledge of intra-oral manifestations of systemic disorders
2. dental triage
3. treatment
    a. administration of drugs, by mouth, intramuscularly, and intraveneously
    b. management, including surgical repair, of lacerations, fractures and wounds, and control of hemorrhage, involving oral tissues and associated structures
    c. preventive dentistry
    d. resuscitation, including provision of an adequate airway
4. expanded knowledge of pharmacology in order to prescribe for emergency medical care
5. psychological management of patients
6. identification of fatalities by dental examination

The potential necessary to provide training in these fundamentals is available within the profession and the development of such training programs is the responsibility of the profession.

The dentist may be called upon, in the initial postdisaster period, to perform functions beyond his normal competence and sphere of licensure. The dental profession, through policies adopted by the American Dental Association and many of the 50 State dental societies, has acknowledged this potential need and has recommended that dentists acquire proficiency in the performance of emergency medical and surgical procedures under the direction of or, if necessary, in the absence of a physician. It is recognized that,

in order to provide these services, dentists should be given additional training in physical diagnosis and treatment. Greater emphasis must be placed on training the dentist in the functions and activities that relate to the management of community or public health problems in an austere medical, social and psychological environment, both in the immediate postdisaster period and in the long-range recovery period that can be expected to follow.

# ROLE OF ANCILLARY PERSONNEL

The health team can be effectively and substantially expanded in a postdisaster situation by the effective utilization of dental auxiliary personnel; the dental hygienist, the dental assistant, and the dental laboratory technician.

The dental hygienist, who is licensed to perform certain intraoral operations, can, within her existing competencies, manage the oral health program of the shelter population and assist in the provision of general nursing services, including the dispensing and administration of drugs under professional guidance. With proper training, she could provide advanced first aid, assist in surgical procedures and participate in the provision of environmental and community health services.

The dental assistant, subject to prior assessment of individual competence, could assist the physician, dentist, veterinarian, nurse, and dental hygienist in the discharge of their respective duties. With proper training, she could render first aid and assist in ward nursing.

The dental laboratory technician, with adequate training, could give first aid. Without such training, he could assist the shelter manager in handling the problems that will require manual dexterity and the exercise of creative or duplicative talents.

# RECOMMENDATIONS FOR IMPLEMENTATION

## A. Plan for Organization

It is a recommendation of the committee that positive leadership be exerted by government at all levels in the framing and promulgation of a finite plan of operation with respect to the provision of health services in the period following a nuclear disaster. The health professions, through their voluntary organizations, are not capable of designing such a plan since national defense, in both its active and passive aspects, is necessarily a function and responsibility of government. The health professions, given the framework of an established plan of organization and operation, will provide the physical resources necessary to support, operate, and assure continuity of such a plan.

The primary source of planning, motivational guidance, and financial support must be the Federal Government. More specifically, it should be the Department of Health, Education, and Welfare working in conjunction with the Office of Civil Defense and extending the resources of these agencies through the United States Public Health Service. This system would provide a continuing opportunity for effective liaison with national health organizations for the coordination and implementation of the plan. Furthermore, it would provide for the dissemination of informational and motivational data down to the next organizational level, the State governments and the State professional associations. The same blending of governmental and professional coordination could be channeled downward to the level where lasting implementation could be effected, the county or city governmental agencies and their professional counterparts.

The core of a successful national organization of health services for disaster preparedness is the intelligent exercise of governmental responsibility. This provides the needed assurance that voluntary efforts will not have been expended in vain. Given this assurance and the opportunity to exercise effective liaison at each level of government, the health professions will cooperate to assure the fulfillment of their responsibility.

## B. Training

Consistent with the expansion of functions of dentists into the two categories of intradisciplinary and extradisciplinary capability, the committee's recommendations are as follows:

### 1. Intradisciplinary Capability

Intradisciplinary capability must be given primary support since its attainment, in many instances, will form the practical and motivational basis for the extension into extradisciplinary capability. With appropriate leadership and support from all levels of government, action programs could be established through organizations representing oral surgeons, dental anesthesiologists, dentists trained in hospital practice, and public health dentists to train the remainder of the profession in their respective specialties. Further, it is suggested that the demonstrated capabilities of the Armed Forces be utilized to the same end. The teaching competence and physical facilities of the dental schools should be utilized, where possible, in the drafting and staffing of prototype programs. A responsibility of professional societies, at all levels, would be to apply motivational force, to emphasize the importance of community service and to incorporate the training programs routinely into their scheduled scientific activities. In each of these undertakings, the professional societies should maintain communication and liaison with their counterpart associations at professional levels. Through this application of intradisciplinary and intraorganizational resources, plus the cooperative support of health-related governmental agencies, the effects of this training effort would be quickly recognized. This result, would add substance to the far-reaching efforts of developing expanded functions in the extradisciplinary realms.

### 2. Extradisciplinary Capability

Extradisciplinary capability cannot be attained by dentists without the effective support and guidance of other professions. The medical and other health professions possess the competence to train a nucleus of dentists in the principles of medical, hospital and public health practice, who in turn, can extend the training throughout the dental profession. The nucleus of initial instructor-trainees should be composed of men that already possess teaching competence or experience in hospital-surgical or public health practice. Also, the forum for the conduct of these initial training activities should be the dental school, since the necessary teaching competence is available in this academic environment. Once the scientific and administrative principles have been imparted to these potential instructors, and the methodology of teaching fixed, these men could develop and present a basic cur-

riculum of expanded function training for further dissemination within the profession.

The committee acknowledges that the educational program envisioned will succeed only through the efforts of the leaders of the dental profession. The community firmly believes, however, that effective planning and support by the Federal Government can stimulate the initiative required. Once prototype programs have been established, perhaps at two or three dental schools, and have been evaluated as effective, the evidence obtained can be expected to serve as guides for other schools of dentistry. The committee, therefore, strongly recommends that such prototype programs be undertaken.

Consistent with the need to train graduate dentists to fulfill their disaster roles is the need to avoid swelling the untrained pool by the annual graduation of more than 3,000 dental students untrained in disaster preparedness concepts and principles. In many instances, this problem has been recognized voluntarily by the deans of the dental schools and the curriculum has been adjusted to include at least a minimum of exposure to the logistics of nuclear disaster and the principles of emergency medical care. Much more must be done, however, and centralized direction is required if these disconnected efforts are to be consolidated and made truly productive. The committee believes that the development and funding of prototype programs by an appropriate federal agency, in consultation with the American Association of Dental Schools, represents the most logical approach to the final and effective solution to the problem.

### 3. Training Dental Auxiliaries

The training of dental auxiliaries will require the exertion of strong motivational influences by the dental profession and by the organizations that represent the three auxiliary groups. First aid courses are available under the auspices of such organizations as the American National Red Cross. The Medical Self-Help Training Program is also being taught on a wide scale. Once motivated to seek the knowledge available through these courses, dental auxiliary personnel are capable of increasing their capabilities. More advanced concepts, for application particularly by the dental hygienist, should be incorporated into the curricula of the dental hygiene schools and into the programs of the dental hygienist organizations. The development of the organizational plan mentioned often in this report, and the positioning of the dental auxiliaries in that plan, should go far to stimulate the members of these groups to seek the types of training that will enable them to fulfill their roles in the postdisaster plan.

## REFERENCES

*Transactions of the American Dental Association, 1960.*
*Summary Report on National Emergency Medical Care,* American Medical Association, 1959.



U.S. GOVERNMENT PRINTING OFFICE : 1965 O—758–745

Publications in the Health Mobilization Series are keyed by the following subject categories:

A—Emergency Health Service Planning

B—Environmental Health

C—Medical Care and Treatment

D—Training

E—Health Resources Evaluation

F—Packaged Disaster Hospitals*

G—Health Facilities

H—Supplies and Equipment

I—Health Manpower

J—Public Water Supply

*Formerly called Civil Defense Emergency Hospitals.

Public Health Service Publication No. 1071-I-2